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ORIGINAL ARTICLES.

The Treatment of Hemorrhoids by Ligature, by Injection, and by the Clamp and Cautery.

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Read before the Central District Medical Society, at Sedalia, Mo., November 4, 1897.

The victim of hemorrhoids sooner or later comes for relief to his doctor. He will ask first a prescription; that failing, a treatment of some kind; last of all, an operation under chloroform.

The anatomy of the parts explains well the classification of external and internal hemorrhoids. The former are derived from the inferior and middle hemorrhoidal veins, and the latter from the superior hemorrhoidal. The superior hemorrhoidal veins supply the rectum above the sphincters—have no valves, and empty into the mesenteric vessels and thence into the portal circulation. These form the internal pile, (where it is a venous tumor, as it generally is in the beginning,) and is caused by any obstruction to the circulation through, or disease of, the visceral venous system, as in liver diseases or retroversion of the uterus, stricture, etc. The middle and inferior hemorrhoidal flexuses supply the anus and contiguous structures, and empty into the iliac veins and thus into the right heart via the vena cava. Their dilatation becomes a fact when disease of the general venous system is at fault: as in the protracted alcoholism, hard coughing, lifting, etc.

The two anastamose, thus forming one of the means of collateral circulation when cirrhosis or other obstructive disease cuts off the portal circulation by pressure.

Clinically, however, we speak of external and internal piles according as they are above or below the grip of the sphincter, and we call them capillary, arterial or venous as they show a preponderance of these blood vessels.

As to treatment (the subject of this paper), we have three principal lines for attack, the injection of caustic and astringent substances, the ligature and excision, and the clamp and cautery. The injection method can be used on all kinds of cases—external, capillary, venous, strangulated, and ulcerated, yet it is not desirable so to use it; in fact, the real usefulness of the method rests in the treatment of internal hemorrhoids of limited number and small size, that have not much ulceration; yet, repeat, that with a good fluid and due care in its use it is possible to cure almost any case of hemorrhoids by injection, if the patient will spend time enough for the treatment to be completed. When inflamed and engorged, it is better if the parts be relieved by a few days of preparatory treatment, which should consist of hot douches, rest, and cathartic doses of sulphur and cream of tartar to unload the portal circulation. When ready for treatment the patient is placed on his side, with limbs drawn up and the tumors brought into view. A five-per-cent. solution of cocaine applied to the parts relieves the pain, and a little straining will cause the pile tumors to protrude.

The tumor selected is then punctured with a fine hypodermic needle, attached to an ordinary hypodermic syringe, and a few

drops of the fluid deposited into its tissue. In pendant tumors get into the center. In sessile tumors inject into their bases. Be careful not to inject the fluid into the muscular tissue of the bowel, as it will cause sloughing of tissue and much prolonged suffering. The portion of the tumor that has been sufficiently injected will turn a dull grayish color, showing the death of the tissue. Where in doubt as to the amount to inject, use two or three drops, and hold the needle in situ while awaiting its action. A few more may be required. I have used the following fluid with success, the formula for which I have taken from Dr. Agnew, of San Francisco, who published it in his book on this treatment:

SOLUTION.

℞ Plumbi acetatis.
Sodii biboratis, aa, ʒ ij.
Price's glycerine, ʒ i.

Mix in a graduate and let stand in warm-water bath for 24 hours.

SOLUTION 2.

℞ Calvert's No. 1 carbolic acid, cryst., ʒ j.
Aqua destil, ʒ ij.

When well dissolved, add six drams of No. 1 to ten drams of No. 2.

This makes a solution that turns pink on standing, and, unless warm, is turbid. It should be warmed before using. Only one, or at most two tumors, should be treated at one sitting. If there is much pain, hot sitz baths, opium and belladonna, or atropine should be given. The anus should be covered with a pad of soft cotton or gauze smeared with vaseline. The bowels should be kept loose by sulphur in some form, either with cream of tartar or in the compound licorice powder. Weyth & Bros. make a very elegant tablet containing five grains each of sulphur and cream of tartar, which is a desirable form for administration.

CASE I.—Mr. S——, of Kansas City, Mo., laborer, employed in lifting and loading freight into cars at the freight depot, came to me February 21. His piles were four in number, ulcerated, inflamed, bleeding, and so sore that he could not work. He absolutely refused operation under anesthesia, and had tried many forms of ointments. I asked for two months to cure him, which he accepted. I kept him in bed one week, applying hot fomentations, when he came to my office for treatment.

After brushing the parts with cocaine, and placing a hot, moist towel against them, they came down readily, with a little straining, bleeding freely. I selected the worst-looking one, and after five minutes spent in slowly injecting about twelve drops of the solution, had the pleasure and satisfaction of seeing it turn a dull gray color and shrink down. He returned every five days and was injected four or five times at intervals of five to ten days. He resumed work after the first injection, keeping the parts covered into the following:

℞ Fl. ext. hamamelis, ʒ i.
Powdered opium, ʒ ss.
Per-sulph. iron, ʒ i.
Vaseline, ʒ j.

Without further incident he continued his work and treatment, and was discharged perfectly cured. He is paying his bill by monthly instalments, and each month expresses his delight at his easy cure. Should a method so useful be avoided because, forsooth, the ignorant quack has used it?

The clamp and cautery is a valuable method where the growths can be removed at one sitting under anesthesia. I wish to say here that I much prefer to operate under chloroform upon these cases, for the following reasons:

1. It is more pleasant for the operator, and he can do better work under general than under local anesthesia.

2. The sphincter can be widely dilated, which alone is sometimes sufficient to cure the case, and always aids materially in cure by any method.

3. It is all done at one sitting, and the cure is thus more rapid and satisfactory.

I present the instruments used in the operation. The cautery is a Paquelin, and is at present charged with gasoline from the grocery. It works all right. The clamps are the pattern of Smith, Kelsey, and Gant. I believe the Gant clamp is best. I like it best. I have operated with only a tissue forcep for a clamp, and succeeded, but it is

not powerful enough to crush the tissue into a firm pedicle. It is best to divide the skin and mucous membrane at the base, fit in the clamp, close it, cut off the tumor with curved scissors, and roast the stump with the cautery at red heat. There is need to see that not only is the cut edge seared, but that the stump is hardened by the heat. The after care and dressing is the same as in case of injection. The patients go about in three or four days, and are entirely well in as many weeks, often in much less time.

The operation by ligature is the next to be considered, and is adapted, like the foregoing, to all severe cases of internal piles where excision under chloroform is allowed. The patient's bowels are emptied the previous day and cleansed by enema a few hours before operating. When anesthetized he is placed in lithotomy position, the sphincter well dilated and the skin and mucous membrane divided, a curved needle threaded with strong silk is passed through the center of the base, the needle cut off, and the two remaining ligatures tied both ways about the tumor, sinking the thread into the line of incision.

CASE II—*Clamp and Cautery.*—Mr. G—, farmer, had old hemorrhoids for six years. Was in bed with an attack of the inflammation of the tumors, and had been for a week. Under his doctor's care he was treated a few days with hot fomentations and laxatives. The soreness, however, did not disappear. He accepted offer of operation, and was anesthetized August 16th. Three stumps were made, each in succession being brought down and the base encircled by an incision running through the mucous membrane and skin. To each in turn the clamp (Kelsey's) was applied, and the tumor cut away with curved scissors. An assistant meanwhile was preparing the cautery, and the stump was immediately and thoroughly seared. The patient had retention of urine, and suffered some pain the first 36 hours, but the parts were kept smeared with vaseline containing belladonna and carbolic acid, and ¼-grain morphine administered hypodermatically. On the 20th he was in the yard, and on the 22d, seven days after operating, rode to town in his wagon. The bowels were kept loose with compound licorice powder at bed-time. His recovery was perfect.

CASE III.—Mr. G——, of Stockton, Mo., had been a severe sufferer from piles for about three years. As often happens, much of the pain was caused by a fissure, though attributed to the pile tumors. Operation was accepted and performed August 21. The bowel was prepared by his doctor, Dr. E. A. Smith, the day before, and an enema given an hour and a-half before the operation. Under anesthesia the anus was thoroughly dilated, and the tumors brought down. Each was in turn grasped by the pile forcep, and the base encircled with a cut running through the skin and mucous membrane. The curved needle was then passed through the base of the tumor and a double silk ligature drawn through, the needle cut off, and the two ligatures thus formed carried, one forward and the other backward, and securely tied, sinking them well into the cut. The tumor was then cut off. The fissure was curetted, the sphincter again stretched, and the rectum, which was much ulcerated and bleeding, packed with iodoform gauze. The packing was removed in 36 hours, and the parts smeared with carbolized vaseline and a pad of gauze placed over it. Two ligatures came away the fifth day, and the third on the seventh day. Three weeks later the doctor wrote that the man was well and could walk, work and sit down without pain, and bowel movements were free and painless.

DANGERS—

1. *Injection Method.*—Extensive slough, and pain from inflammation of cellular tissue beyond the pile.

2. *Ligature.*—Retention of urine; swelling of parts with pain; tetanus.

3. *Clamp and Cautery.*—Retention of urine; pain and swelling; free hemorrhage in 12 to 20 hours; tetanus.

4. *All.*—Shock from operation; secondary hemorrhage.

I have never seen serious trouble or death follow an operation for hemorrhoids.

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Topeka, Kansas, Saturday, Nov. 20, 1897.

The Orphans' Home Epidemic.

Atchison, Nov. 10.—The disease which is epidemic at the Soldiers' Orphans' Home here is puzzling physicians. None seem to be able to state the nature of it. If one man says diphtheria, the next one to come from there says something else. S. C. Wheeler, secretary of the State board of charities, visited the institution yesterday, to find out what the trouble is, and reports that it is not diphtheria.—*Topeka State Journal.*

"That's good too." The secretary of the State board of charities has evidently become a practical bacteriologist. Possibly his extended experience in the treatment of the imbecile, the insane and the criminal of the State has been of more benefit than is usually expected of a member of the honorable Board of Charities will derive from such a position. But what has become of the State Board of Health? Is it possible that the powers of this august body have been delegated to the Board of Charities?

If we are not mistaken our friend, Dr. Gill, was appointed to fill the position of secretary of the State Board of Health. Are the physicians and health officers of Atchison ignorant of this fact? If so, probably the same condition of affairs may exist in other sections of the State. The last legislature seemed nearly convinced that the State Board of Health had out-lived its usefulness, and only at the eleventh hour was it possible to secure even one-half the ordinary appropriation for its maintenance.

The law which created the State Board of Health, while defective in some minor points, still gives the board ample power to do some work that is of vast importance to the citizens of the State, and which the profession particularly desires. The successful performance of this work lies in a great measure with the secretary, and if we correctly interpret the intent of the original act creating this board, it was intended that the secretary should be, to all intent and purposes, its executive officer, at least during vacations of the board. To properly carry out the duties devolving upon this office requires the undivided time and attention of the incumbent.

That the compensation is inadequate for the services is not a valid excuse for neglect.

In accepting any public office the officer assumes the duties and obligations imposed by the office. Quarters have been established for this department in the State Capitol building, and naturally every physician in the State expects to find its executive officer there, unless he be absent on official business. There is nothing which will so surely bring the Board of Health into *greater* disrepute than such evidences of inactivity as that which prompted these few remarks.

The present State Board of Health is composed of many honorable and able professional gentlemen, some of whom have set on former boards, and some of whom are personal friends, but who, like their predecessors, have not the time or means to devote

to an effort to improve the condition of their board, but depend upon their secretary to tell them what is needed and how to do it.

In conclusion we wish to remind the board that the last legislature cut their appropriation in the middle, and even then it was only at the last moment that the appropriation was saved from the legislative executioner. The law creating this board was secured only by great effort, and it should not be allowed to go to the wall. It is much easier to keep that which you have than to secure new things. The State Board of Health from its apparent uselessness has always been an eye sore to the committees in our legislatures, and a number of times it has come near receiving its death blow. It is the only thing which represents a large-learned profession whose every acts are for the good of the people, without regard to race or creed. No medical laws of importance grace our statute books, and therefore we do desire that this board with its ample powers do something to show the people that the medical profession still stands, as it always has, the disinterested advocate of preventive medicine, and of a higher medical education and ability; to show to the profession that as their colleagues they desire to stand as an exponent of modern scientific medicine in all its departments, and that they desire to elevate the profession to a higher plane of usefulness, and not make its head hang in shame as it has done on numerous occasions during the past few years; to show to the legislature that the State Board of Health is quite as efficient and valuable as any other board under the State government, and that appropriations granted it are not useless luxuries.

Do Doctors Cure Disease?

The public is suffering to an extent of which they have little comprehension, in consequence not only of their own misapprehension, but that of physicians themselves, respecting the functions of the medical man. That it is not the physician's duty to cure disease is evidenced by many facts. Not a few diseases are incurable, being either fatal or self-limited in their nature. No intelligent physician professes to be able to *cure* measles, smallpox, diphtheria, whooping-cough, typhoid fever, or any other disease of a similar character. Under favorable conditions, however, the patient recovers from all of these maladies—not, however, by the cure of the disease, but by its disappearance after having run its alloted course.

To make the meaning clearer, one or two illustrations may be offered: Morphia will cure pain, but it does not remove the cause of the pain. It cures the difficulty, but not the patient. An anesthetic will cure the pain caused by the amputation of a leg, so that the operation may be painless; but the patient is not cured—at least not by the anesthetic.

The public should be educated up to the idea that disease is not altogether an evil; that it is simply a manifestation of morbid conditions present; and that if these are removed at all, it must be as a rule, by the efforts of nature, through the natural forces of the body—the *vis medicatrix naturæ*. To check these efforts without removing the natural process, and to make the patient worse rather than better. Physicians should continually instruct their patients that nature is the great physician, and that if they are cured at all, it must be by the recuperative powers of their own bodies, the duty of the physician being simply to aid nature in accomplishing this, and not to thwart or embarrass her efforts to restore the sick man to health.—*Modern Medicine.*

The physician who would cure disease must learn to interpret the forces of nature, and imitate her methods or assist her efforts, and in this way he does cure disease. Nature, if left alone, too frequently plays sad havoc with our cases of syphilis, and gives a long lease of life to the malarial germs which infect our swamp districts. There are diseases which are curable from the standpoint of therapeutic effect, and yet it certainly need not be antagonistic to natural processes. Granted, that there are diseases

which are self-limited, but may be fatal under unfavorable conditions, the physician, by removing the unfavorable condition, brings about a cure. The physician not only cures disease, but by his timely interference prevents many of the serious consequences of disease. We object to pessimism any where, but especially in this, the noblest profession of all.

New York Academy of Medicine.

Section in Orthopedic Surgery. Meeting of October 15, 1897.

Congenital Absence of the Radius.—(Abstract of a paper read by Dr. H. L. Taylor.)—The absence or imperfect development of the radius in the new-born causes the appearance of club-hand from dislocation of the carpus to the radial side. Case I. Girl; five weeks old. Absence of the radii. Hand at right angles with fore-arm. Genuvarum. Mechanical treatment. The figure shows

SKIAGRAPH OF THE LIMB IN CASE I.

the absence of the radius, and the ulna shortened, thickened, and bent; also the improved position of the hand at fifteen months. Case II. Girl; two weeks old. Absence of the right radius and both thumbs, with their metacarpal bones. The deformity of the right hand was extreme. The patient lived but a few months. Case III. Boy; five weeks old. Slight double radial club-hand, with the radii abnormally small. The hands were kept in good position by leather splints. Case IV. Girl; two-and-one-half years old. Absent, ulna and the fourth and fifth digits, with their metacarpal bones. Radius thickened and bent toward the ulnar side. The hand usually turns toward the ulnar side, but is sometimes held straight. The elbow has abnormal lateral mobility and hyperextension, as might be expected from absence of the ulna. Children with deficiencies of this kind are usually premature or still-born. If alive, they seldom live many weeks. There are about 200 recorded cases of absent fibula, and 100 of absent radius; but the deficiency shown in Case IV, absence of the ulna, is believed to be very rare. The dimples, furrows, and scar-like marks, vestiges perhaps of separated adhesions, support the theory that these defects are caused by the pressure of a contracted amnion. As rotation of the fœtal limbs is said to begin about the fifth week, if the amnion exerts pressure from the fifth to the eighth week, the radius and fibula may be blighted. If, on the other hand, the contraction takes place before the fifth week, and before the rotation of the limbs, the ulna and tibia will suffer. Operations, if performed, should be preceded by mechanical treatment. Contracted structures may be divided. Osteotomy may be followed by over-correction, and the ulna may in various ways be attached to the carpus in an improved position.

Dr. R. H. Sayre said that he had treated a patient affected with double congenital absence of the radius by manipulation, stretching, and retention in plaster of Paris. The hands had been brought into a fairly normal position, but the child died of cholera infantum when ten months old. In another case the ulna was so small that it hardly seemed feasible to split it for the

reception of the carpus, as has been done in a reported case. He therefore fixed the ulna in a gap made in the carpus.

Dr. A. M. Phelps said we could hardly use the term club-hand in speaking of congenital absence of the radius.

Dr. A. B. Judson said that there seemed to be no affection of the hand corresponding to congenital club-foot. So-called club-hand was caused by deficiencies of the skeleton, by injuries and diseases of the bones, by cicatricial contraction, or by paralytic affections. There were also cases of club-foot originating in all of these ways; but what we know as congenital club-foot is caused by factors which are apparently not operative in the upper extremity.

A Case of Traumatic Club-Hand.—Dr. Taylor exhibited a girl, eight years old, a portion of whose radius had been resected for necrosis. The radius was, in consequence, much shorter than the ulna, and the result was that the hand was thrown toward the radial side, and had the appearance of a club-hend.

Dr. Phelps said, that in a case of club-hand thus acquired, he would shorten the bone instead of cutting the tendons. Tendons, when divided in their sheaths, are apt to become adherent, while resection of the longer bone would, in suitable cases, bring the hand to a normal position.

Traumatic Club-Foot.—Dr. Judson was reminded of a patient whose tibia had been shortened for disease of the bone. As the boy grew the fibula projected to such a degree that the patient could not walk. In such cases another operation was necessary to shorten the unaffected bone.

Dr. R. Whitman was reminded of a man whose tibia had been shortened by an operation when he was thirteen years old. The result was that when recently seen the leg was five inches short, and the foot had been forced into extreme varus by the relative over-growth of the fibula. Bone reproduced to fill an interval left after resection did not grow. Final results after such operations, performed in childhood, were usually unsatisfactory.

Dr. R. H. Sayre cited a case which showed that reproduced bone did not cease to grow. The patient had been exhibited to this Section by Dr. L. A. Sayre. Four inches of the neck and head of the femur had been removed, and when the boy was twelve years old there was only about one-quarter inch of shortening. In some of Dr. J. R. Wood's resections of the jaw, the lower maxilla had been reproduced and had grown with the rest of the body.

Dr. Whitman said he referred to parallel bones of the extremities. Deformity was almost inevitable when a portion of one bone only is removed.

Dr. Phelps said that new bone had feeble circulation, grew less rapidly than normal bone, and became very hard, as was shown when one of two parallel long bones was reproduced.

Dr. R. H. Sayre said that the vicinity of a nutrient artery would probably influence the growth of new bone.

A Case of Helpless Club-Foot, from Deficiency of the Skeleton.—Dr. R. H. Sayre described a case in which double club-foot was associated with congenital deficiency of both of the bones of the leg, in a girl twelve years old. There was a bent and rudimentary fibula, and a tibia only an inch or so long which stuck out like a little sprout under the skin. The foot was very much twisted, and hung with a helpless flail joint against the leg. Amputation at the knee was done.

Club-Foot Caused by Absence of the Fibula.—Dr. Whitman exhibited a child, eight months old, in whom congenital absence of the fibula had caused talipes equino-valgus and anterior bowing of the tibia. The equinus had been extreme, but division of the tendo Achillis and the application of a brace had brought the foot to a right angle.

Dr. Taylor had seen eight or ten patients affected with congenital absence of the fibula. He said that in such a case it was very difficult to remove the lateral deformity by an operation. As there was no malleolus to support the foot, it would return to its former position. Another interesting point was, that the shortening found in infancy, in congenital absence of the fibula, would greatly increase with the growth of the

child. In an adult, whose measurements he had taken for some years, there is a shortening of five or six inches. In a boy of twelve years the shortening was the same, and increasing. This progressive shortening took place in the forearm as it did in the leg.

The Treatment of Acute Solar Pneumonia.

Adolph Zeh, M.D., in The Post-Graduate.

With the advance of medical science the etiological factor, and the therapeutic resource as well, have required modification or extension in a variety of diseases; among these it seems fairly warranted to place pneumonia. It is now quite definitely confirmed that this malady is also an infectious disease, having as its exciting agent the diplococcus of pneumonia of Fraenkel. It naturally follows that the disease should have a specific line of treatment discovered for itself; in this we have not, as yet, sufficiently advanced, although Klemperer is assiduously working along that line with his anti-pneumotoxine. Until successful experiments and experience develop a specific treatment, we will be compelled to use discriminating judgment in the management of our severe cases of pneumonia; whereas, the mild cases—that is, one in which the pathological change is limited to a small area of lung tissue—will give rise to very little concern if careful nursing is obtained and uncalled for medication is avoided.

The treatment of all cases, whether simple or severe, by reason of its extensiveness or complication, resolves itself, in the first place, into attention to the surroundings; secondly, the patient's diet; thirdly, the use of drugs and external applications; and lastly, the management of convalescence. Regarding the first condition, it matters little what the variety of the disease or its severity is, the patient must be put to bed at once. The bed must be high and narrow, and of metal (making it capable of thorough disinfection—every well-regulated household should be possessed of one), the mattress to be soft and springy, and covered with rubber sheeting, over which a spread is drawn taut. The room should be as large a one as can be had, without carpet or drapery; in fact, architects would do well to so build as to have one room that can be quickly and conveniently turned into a sick-chamber, whose walls and ceiling are plain and provided with round corners, so that they can be washed and disinfected with little expense or destruction.

The location of the room is best on an upper floor, and at the rear end of the house, away from the noise of the street, with abundant window space.

The temperature of the room to be kept at 60° F. The air to be moistened by use of a croup kettle.

Visitors are to be denied admittance until convalescence has undoubtedly set in.

A competent nurse is all important. A stranger to the patient invariably makes a better nurse than a member of the family when the case is apt to be serious or prolonged.

Secondly, the feeding of the patient must also be carefully considered. It should be varied and only fairly abundant. Skim milk, diluted with seltzer, or other ærated water, or with a weak tea or coffee, preferably the latter, thus lessening the danger of the formation of large and troublesome curds in the stomach. Buttermilk, koumiss or matzoon, beef-tea, the prepared extract of meat or meat-juices, as Valentine's, Bovox, Bovonine, etc., expressed blood from beef, scapped beef, calves'-foot jelly, ice cream. In the very weak and depressed Liquid Peptonoids or Somatose. The patient must be given an abundance of pure water.

Thirdly, the use or abuse of drugs gives rise to a variety of plans of expectant, or, according to some, supposed specific treatment. The most rational treatment is the purely expectant plan, and that is the following. All are agreed that the results of any pronounced infectious poisoning of the system paralyzes all the vital functions, retarding the secretions and excretions. This condition, resulting in auto-intoxication, which, if not speedily relieved, will aggra-

vate the disease, consequently our first effort must be to eliminate the effete products from the system, which is best done by the administration of a brisk cathartic and the production of diaphoresis. The administration of ten grains of calomel and jalap; or a compound cathartic pill, together with ten to twenty-five grains of blue mass, both to be followed, after the lapse of six hours, with citrate of magnesia, or other saline cathartic, to insure thorough evacuation of the bowels and complete elimination of the mercury. This to be repeated every second or third day if the bowels are inclined to be sluggish, or a complicating nephritis exists. Thereupon, to replace the ferments which are not normally produced in conditions of fever or infection, this is accomplished by the administration of ten to twenty drops each of dilute hydrochloric acid and glycerite of pepticum three times a day, after the partaking of some food, and the giving of three grains each of the inspissated ox-gall (Mercks) and extract of pancreatine, in capsule form, before eating. If constipation persists, the compound extract of colocynth one or two grains, or resin podophylin one-eighth of a grain, is to be added to each capsule. The result will be that the patient can be more readily nourished without the development of any fermentation products in the alimentary canal, and consequent absorption of irritating elements.

The use of drugs affecting the arterial tension, as aconite, veratrum viride, etc., with the hope of influencing the local pulmonary condition, is to be deprecated, as this makes the arterial system a venous system, and in reality increases the work of the heart, and thus ultimately embarrasses the pulmonary circulation which was sought to be relieved.

The question of removing blood absolutely from the system is more worthy of consideration. This is most serviceable in young, robust individuals, at the beginning of the disease, in whom the aerating space of the lung has been diminished by reason of the extensiveness of the pneumonia, or in such cases where a pre-existing pathological condition has produced the same result, or during the stage of resolution when the lung is not sufficiently well cleared of the liquified exudate, which the use of stimulants and resolvent drugs cannot remove, resulting in overcharging the system with venous blood. The quantity of blood to be withdrawn is to be determined by its effect, which is shown by the pulse becoming slower, stronger and fuller, and the respiration easier, fuller, and less painful. The amount of blood withdrawn may range from five to twenty ounces. This procedure is superior to leeching or the application of wet cups, as it is quicker and the bleeding can be better controlled. The application of poultices is undesirable, as it adds weight to the chest, thereby impeding respiration. The smell of flaxseed is nauseating to many patients. The rubbing of oil over the chest fills up the pores and prevents diaphoresis, which ought rather to be encouraged.

For the headache, nervousness and delirium the ice cap is the best remedial agent to use; if acute mania sets in, large doses of morphine are indicated.

If local pain is very great, an injection of morphine is very serviceable. For the cough, if very annoying and frequent, and a single injection of morphine has not relieved it, the administration of five drops of tincture of opium, or one-quarter of a grain of codeine, every three hours is indicated.

The question of stimulation is always important, and calls for the physician's keenest judgment and therapeutic resource. Digitalis, although praised highly by some, is not to be depended upon as when most needed, it may have developed its cumulative effect, and then adds to rather than diminishes the danger.

The drug *par excellence* is the sulphate strychnine, which can be given in one-twentieth grain doses every four hours. Other very serviceable drugs that can be used in addition, in very severe cases, are caffeine, camphor, musk, caffeine sodium salicylate, caffeine sodium benzoate, ammonia and ether (hypodermatically). For hypodermatic injection the following are most useful: A 10-per-cent. solution of camphor in olive oil, of which 30 minims represent a

dose; or benzoate of soda, 44 grains; caffeine (Mercks), 36 grains, and distilled water, 1½ drachms (of this solution 15 minims represent a full dose of caffeine); or salicylate of soda, 47 grains; caffeine (Mercks), 1 drachm, and distilled water 1½ drachms. To make this solution the application of heat is necessary, and in cold weather the bottle containing the solution must be placed in hot water before the syringe is used. The dose of this is also 15 minims. In preparing these solutions it is absolutely essential that a pure caffeine be used, as is that manufactured by Mercks. Heart stimulations must be given early, so as to forestall any sudden cardiac failure. This is best guarded against by never allowing the pulse to go above 100° or to become weak or irregular. It is very essential not to depend upon the state of the pulse only, but to examine the heart itself. This is specially necessary in the old and such as are affected with atheroma.

If alcohol can be withheld it is preferable, as thereby the digestive system is less apt to be deranged; but in the old and debilitated, and such as have been accustomed to its use, it must be supplied from the beginning, and that in liberal quantities.

Champagne makes a very serviceable stimulant, as it causes practically no gastric distress. When whisky is given it is best diluted in the milk, and given in half-hourly doses in the urgent cases. In all cases that require the use of alcohol, and particularly in those addicted to its liberal use in health, the sulphate of strychnine must be administered in the very beginning of the disease, and in large doses.

The use of oxygen seems to me to be unnecessary where there is an abundance of wholesome air, as the blood cannot take up more than a definite quantity of oxygen, which is amply supplied in the normal air. The use of oxygen, acting as a stimulus, hastens the respiratory act, but does not on that account increase the quantity of oxygen which a definite quantity of blood can absorb. This same stimulation can be obtained in other ways.

The fever does not, as a rule, require any special treatment, as in most cases the degree of bodily heat is not over excessive, and its duration is comparatively short. When there is a nervous element present a single dose of 10 grains of anti-pyrine will frequently reduce the temperature two degrees, at which point it often remains. It is unwise, however, to repeat the dose.

It is, perhaps, now proper to suggest a line of treatment which, if carried out conscientiously, will do away with much drug medication, even in cases of great severity, namely, the proper and persistent application of cold.

Every case must have an ice-bag applied to the head. This will relieve the headache, nervous manifestations, restlessnees, and delirium; also favorably influence the temperature. At the same time the patient's chest is to be enveloped in cloth, wet with water, of 65° F. temperature, which are renewed every hour, then covered with a dry sheet.

The extremities to be enveloped in flannels, the arms can be best managed by removing the body of a flannel shirt with long sleeves, leaving a strip to cover the shoulder, with the neck-band attached, thus the chest and back will be exposed to the effects of the cold application, which can be applied with very little disturbance to the patient. The result is that the pleuritic pain will be alleviated, cough lessened, heart's action stimulated, and pulse rate diminished. Respirations are also less labored, less frequent, and more effectual, and the temperature is reduced without producing any depression to the patient. It likewise tends to promote diaphoresis and improves the general tone. Complications are less apt to arise, and the patient spared much medication, with a consequent improvement of his digestive system which renders feeding less difficult. The duration of the disease is also cut short. The more disagreeable, troublesome and repulsive tub bath or ice pack is rendered unnecessary. The cleansing of the naso-pharyngeal space with a mild antiseptic solution three times a day favors the respiratory act. A dilution of one to twelve of Borolyptol, or a half teaspoonful of common salt to a goblet of lukewarm water, will effect the nasal toilet.

If, during the stage of resolution, the expectoration is not profuse, while there is a considerable amount of exudate present in the bronchial tubes, the following will be of great service:

Tr. opii. deod., M. v.
Ammon. muriat.
Ammon. carbonat., aa gr. vii.
Tr. cubeb., *M.* xv.
Syr. tolu, q.s. ad ℥ ii. Every 3 hours.

The period of convalescence requires prolonged rest in bed, at least five days, with administration of abundant food, as meat, fish, oysters, milk and eggs. A sojourn of several weeks in a temperate and equable climate is of decided advantage—such as is obtained at Hot Springs, North Carolina or Bermuda.

To recapitulate, in short, the treatment is thorough, and repeated evacuation of the bowels, the administration of hydrochloric acid and pepsin, of Fel. bovis inspissatum and extract of pancreatine, the application of cold to the head and chest, and such few drugs as are indicated for stimulation. The giving of plain, nutritious food with abundance of water.

Should an effusion develop the same had better be aspirated; an empyema requires resection of a rib, but is better postponed until after resolution has set in if condition will allow. A nephritis, which, perhaps, is the most common complication, is met by the use of drugs suggested, special strychnine and caffeine combined, with production of diaphoresis.

Quinine as an Oxytocic.

Wm. S. Stoakley, M.D., in the Medical Fortnightly.

How did we come to know about the oxytocic tendency of quinine? The Southern doctors having malaria to deal with gave the drug during gestation to cure chills, and in the meantime abortion took place; but might it not have been more the condition for which the drug was given than the drug itself, which caused the uterus to expel its contents?

About this time (many years ago) the idea of suppressing or aborting the fever of malaria with large doses of quinine possessed the minds of a great number of Southern physicians, and was actually carried out to that end in a number of instances by aggressive practitioners, with such success as to cause—like many other new departures—it to be undertaken by incompetent hands, and gave rise to adverse effects other than miscarriage.

This drug, which is so valuable, has to bear the blame which should attach to the prescriber, and not to it under such circumstances. Every family kept and used the drug in extreme; hence hematuria, nettle-rash, abortion, kidney and bladder troubles, deafness and a host of other bothers occurred as a consequence, which, of course, would not have been the case had the drug been given with judgment. The effects of this drug are various, according to the doses given. Than it, we all know, there is no better tonic in the materia medica; it is also a powerful antiseptic.

When more than is actually needed is taken in the system—like every other thing in this wide world—the overplus, having no good to do, must do harm. Such is a lesson to us, not only with quinine, but of every other drug in the pharmacopœia. What nature cannot use she throws off as excrete. If such is the case with food, why not with medicine? Here medicine is an exact science none will deny.

In anæmic cases small tonic doses of quinine might help, or at least do no harm during labor, while overdoses would evidently do much harm in various ways.

Its oxytocic effects may be something after the manner of aloes, or any drastic purgative. In fact we have to look out for reflexes as often equivalent to direct action; thus we are not always to say what their extent will be, or, what notion may possess them. Such is the behavior of quinine during gestation; after this manner possibly its oxytocic tendencies may show themselves, but to say the least, in whatever manner they may come about, I must admit I have no faith in this drug for uterine inertia.

Creolin After Abdominal Operations.

American Medico-Surgibal Bulletin.

There is one class of cases, says J. Malseed Bell (*Medical Record*), presenting irritability of throat, nose, or bronchi, accompanied with anorexia, which forbids the exhibition of internal dosing, in which there is no treatment possible other than inhalations; in others, while internal remedies are fairly well borne, comfort is maintained and convalescesnce facilitated by an adjunct in the shape of an inhalalation; in all cases of nervous susceptibility with laryngeal and bronchial affections, any treatment is aided materially, and many a night-call prevented by the use of an inhalattion.

In all such cases a charming remedy is found in creolin, ten or fifteen drops vaporized twice or even once during the night, on a stove lid or a tin plate over an alcohol lamp. But the field in which it is most highly valuable is in irritable conditions of the throat and lungs, existent with or occurring during the early convalescence of cases of abdominal section, hernia, and operations upon the scrotum—cases in which coughing, even slight, jeopardizes the safety of ligatures and stitches, and impairs more or less, primary union. The following case illustrates the virtue of this agent in such conditions:

The patient under treatment had a distressing cough, but the severity of the abdominal symptoms demanded immediate attention, and therefore no time was taken to ameliorate it. An incision was made, and an ulcerating appendix, three inches long, was removed. The cavity was drained, and the patient put to bed, suffering with some shock. A hypodermrc of strychnin nitrate, one-fortieth grain, developed some tetanic spasms, which, with the incessant cough, threatened the integrity of the wound, if not the life of the patient. By the second day the temperature had returned to normal, but the cough persisted, and with it an irritable stomach, that was a constant menace to convalescence. Creolin was vaporized in quantities of ten drops twice during the first day, and twice during the night, and until convalescence was so far established that other means could be employed. The patient sat up on the sixteenth day, and on the twenty-first day was discharged.

The relief afforded by breathing an atmosphere at once moist and soothing is never more fully appreciated by the patient as well as the physician than in such a case as the one quoted. Not only does the creolin possess the virtue of relieving the patient, but its vapor in the room during the dressings tends to destroy the more or less pathogenic bacteria that must emanate from respiratory organs undergoing a pathological process.

Dressing Suppurating Wounds With Sodium Carbonate.

American Medico-Surgical Bulletin.

Dr. Gueorguievsky, a Russian army physician (*Medical Weekly*), has made the important observation that compresses, soaked in a 2 per cent. solution of chemically pure sodium bicarbonate, covered with some impermeable tissue, will stop purulent secretion, and arrest phlegmonous inflammation more rapidly than all ordinary antiseptics, such as carbolic acid, iodoform, etc.

He discovered this remarkable property of sodium bicarbonate accidently in a case of whitlow. There were phlegmonous inflammation of the index finger with extension to the palmer aspect, and edematous swelling of the back of the hand and of the lower third of the fore-arm. The finger was incised, and a great quantity of pus issued from the opening, which was afterward washed and plugged with a band of gauze, impregnated with iodoform ointment (iodoform, 2 gme.; balsam of Peru, 4 gme.; oil of peppermint, 4 drops; vaselin, 15 gme.), and the whole covered with an antiseptic dressing. In the evening of the same day, the suppuration was still very abundant, the palm of the hand very painful, and of a leaden color. A sound was introduced into the opening, passed up beneath the tendon of the common extensor of the fingers, and

on for 8 centimeters under the soft parts of the palm. Dr. Gueorguievsky wanted to make a counter-opening at this point, but only succeeded in scratching the thickened epidermis, the patient having suddenly withdrawn his hand.

The surgeon then decided to postpone the operation, and, in order to soften the tissues, ordered the whole hand to be enveloped in gauze compresses, soaked in a 2 per cent solution of sodium bicarbonate. Next morning, on examining the hand, he was extremely surprised to see that the condition was very different; there was no pain, no redness, no swelling of the parts; there was no trace of any suppuration on the dressing or in the wound, and not a drop of pus could be brought out by pressure on the finger or on the palm. The compresses—which the patient called "magical"—were continued, and the cure was completed in an extremely short time.

Since then, Dr. Gueorguievsky has often treated in the same way cases of whitlow, or of other circumscribed or diffuse phlegmonous inflammation. He first incised the purulent collection, gave issue to the pus, and covered over the surface of the open wound and the whole inflamed region with compresses soaked in a 2 per cent. solution of sodium bicarbonate. In every instance, the pain and the suppuration were arrested, and cure was rapidly completed without the use of any drainage, which is so often the cause of intense suffering to the patient. In several cases it was possible to prove by direct experiments the superiority of sodium bicarbonate over the antiseptics which are in common use in the treatment of inflammatory lesions. Whenever, in these cases, the sodium bicarbonate was stopped and the iodoform ointment applied, the suppuration at once returned, but ceased again as soon as the sodium-bicarbonate dressings were reapplied.

Condensed Milk in Infant Feeding.

C. G. Kerley, M.D., in Medical News.

The author calls attention to the difference existing between the composition of breast milk with a 3½ to 4 per cent. of fats, a 7 per cent. of sugar, and a 2 per cent. of proteids, and condensed milk which is usually administered in a one-in-twelve dilution, giving a 0.5 per cent. of fats, a four per cent. of sugar and a 0.6 per cent of proteids. The deficiency of fat may be made up by the addition of cream, in the poorer patients by administering cod-liver oil after feeding. The proportion of proteids by the addition of the condensed milk to a meat broth; by boiling a pound of lean beef in a quart of water until the liquid is reduced to a pint, this broth contains 0.8 per cent. of proteids. One part of condensed milk added to twelve of the broth makes a mixture of 0.5 per cent. of fats, 4 per cent. sugar and 1.4 per cent. of proteids, this with the addition of cod-liver oil to the diet to bring up the fats, answers very well for an infant three months of age. At six months the proportion should be one part of condensed milk to nine of broth, giving a 0.75 per cent. of proteids, this does until the age of nine months, when some of the proprietary infant foods may be substituted. His opinions in brief are:

1. In the artificial feeding of infants always determine as accurately as possible the percentage of the food constituents.

2. Condensed milk alone is an indifferent substitute for mother's milk, no matter what the age of the infant may be.

3. Condensed milk alone should not be given after the third month.

4. Condensed milk, fortified, may be made an acceptable diet for infants; alone, it is a food upon which a certain number of children exist until age or a changed condition allows of a better diet, and inasmuch as there is nothing to take its place among the very poor its value to them is inestimable

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A Vital Question.

In a recent exhaustive article on the alarming question of food adulteration, the *Medical Progress* says: If food that should be pure, especially when it is required for the sick, is thus adulterated, how are we to expect the recovery of our patients? The best way out of the dilemma is for the physician to insist that his patients shall have only products as are prescribed and recommended by him! There is one article of diet that can be relied on whenever a nutriment is needed for the invalid, and it is the Imperial Granum Food, a wheat preparation of absolute purity, that is especially beneficial in all gastric and enteric troubles.

About Children.

Six lectures given to the nurses in the Training School of the Cleveland General Hospital in February, 1896, by Samuel W. Kelley, M.D., professor of diseases of children in the Cleveland College of Physicians and Surgeons (Med. Dept. Ohio Wesleyan University); pediatrist to the Cleveland General Hospital; consulting physician to the Cleveland City Hospital; president, 1896 and 1897, Ohio State Pediatric Society; editor *Cleveland Medical Gazette*. 180 pages. Price, in buckram, postpaid, $1.25 net. Cleveland: The Medical Gazette Publishing Company, 1897.

The book makes no pretence of being a complete treatise, either upon the diseases of children or the nursing of them, but it is replete with knowledge of the greatest interest and use to to all who are concerned in the welfare of children.

Dr. Kelly has had an extensive clinical experience with the medical and surgical diseases of children, and his clear and vigorous style is well known to many physicians who, as students, sat under his instructions, as well as to readers who have perused his editorials and essays during the past dozen years. The arrangement of the subjects in these lectures allows the introduction of the greatest number of topics without unnecessary repetition. By referring to the index, every statement bearing upon a given subject can be found and read connectedly.

It is not a "family doctor," and contains no prescription nor directions for medical treatment.

Ferratin.

In a clinical report on the value of ferratin in anemic conditions, Dr. C. Earle Williams (*American Therapist*) reports the following interesting case, typical of frequent occurences in general practice:

T. P., age 19. Came under my treatment May 10, 1897. She had not menstruated for five months. Her complexion was chlorotic, with large dark rings around the eyes. There was dyspnea and palpatation on the slightest exertion, constipation sometimes lasting seven days. Vicarious secretion was represented by frequent nose-bleed. Blood count showed red cells 3,000,000, hemoglobin 52 per cent. She was placed on ferratin, gr. viij, four times daily, with aloetic purges, combined with perfect rest. June 15: great improvement in every way. Red cells 3,700,000 per ccm., hemoglobin 65 per cent. The dose was increased to gr. xij, four times a day, unintermittingly until August 1, resulting in complete recovery. All the distressing symptoms had left; menstruation returned, quantity and quality good; red cells 4,600,000, hemoglobin 92 per cent.

Referring to purges, the author suggests the following combination with ferratin:

1. ℞ Ferratini, ʒ ij
   Rad. rhei pulv. ʒ iv
   Sodii bicarb, ʒ ij
   Ol. foeniculi, gtt. xxx

M. S. Take a teaspoonful in water, or dry into the mouth, and wash down with a draught of water or other liquid.

2. ℞ Ferratini, ʒ iij
   Extr. aloes, gr. xiv
   Extr. rhei comp., gr. ix

M. S. Make into thirty tablets; take one or two tablets twice daily.

Dr. Williams' report, covering six varying cases in detail, is a practical paper of general interest.